

Amendments In the Claims:

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Claim 1 (Currently Amended): A deep bass sound booster device, that receives left-channel and right-channel input sound signals and performs sound reproduction therefrom in stereo when either reproduction with loudspeakers or reproduction with headphones is selected, comprising:

[[a]] left-channel and right-channel high-pass filter filters to which an is the left-channel and the right-channel input sound signals are fed respectively, the high-ass filters having high-pass characteristics in and which permits only [[a]] frequency component components higher than a predetermined frequency are allowed to pass through so as to output a resulting signal for outputting;

a bass booster ~~to which the input sound signal is fed and which amplifies~~ for amplifying only [[a]] frequency component components lower than the predetermined frequency of signals resulted from adding the left-channel and the right-channel input sound signals together, and attenuates another attenuating other frequency component components for outputting so as to output a resulting signal;

a left-channel adder capable of adding two left-channel signals together and outputting resultant signals, the two left-channel signals being output signals from the left-channel high-pass filter and output signals from the bass booster;

a right-channel adder capable of adding two right-channel signals together and outputting resultant signals, the two right-channel signals being output signals from the right-channel high-pass filter and output signals from the bass booster; and

~~a switch to which the signal output from the bass booster is fed at one end and which, when turned on, outputs that signal at another end; and~~

~~an adder to which the signal output from the high pass filter is fed and to which the signal output from the switch is fed, the adder adding together those two signals and outputting a resulting signal~~

A) switching means for forming a first signal path when the reproduction with loudspeakers is selected and forming a second signal path when the reproduction with headphones is selected, wherein, when the first signal path is formed, output signals of the left-channel and the right-channel high-pass filters are fed to left and right loudspeakers intact respectively and output signals of the bass booster are fed to a bass loudspeaker, and, when the second signal path is formed, the two left-channel signals are added together by the left-channel adder so as to be fed to a left side of the headphones, and the two right-channel signals are added together by the right-channel adder so as to be fed to a right side of the headphones.

Claim 2 (Currently Amended): A deep bass sound booster device as claimed in claim 1, further comprising a connector to which the headphones are connected,

wherein, when the headphones are connected to the connector, the switching means forms the second signal pass for the reproduction with headphones by way of contacts provided in the connector, and when the headphones are disconnected from the connector, the switching means forms the first signal pass for the reproduction with loudspeakers by way of the contacts provided in the connector ~~the switch is turned on when the signal output from the high pass filter and the signal output from the bass booster are added together and fed out of the deep bass sound~~

~~booster device, and the switch is turned off when the signal output from the high pass filter and the signal output from the bass booster are separately fed out of the deep bass sound booster device.~~

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Claim 3 (Currently Amended): A deep bass sound booster device, as claimed in claim 1,
further comprising level adjusting means for adjusting a level of signals fed to the bass booster,

[[:]]

~~a first adder to which two input sound signals are fed and which adds those two signals together and outputs a resulting signal;~~

~~a bass booster to which the signal output from the first adder is fed and which amplifies only a frequency component lower than a predetermined frequency and attenuates another frequency component so as to output a resulting signal as a second sound output signal;~~

~~a second output terminal by which the signal output from the bass booster is fed out of the deep bass sound booster device; and~~

~~two processing blocks, each comprising:~~

~~a high pass filter to which one of the two input sound signals is fed and which permits only a frequency component higher than the predetermined frequency to pass through so as to output a resulting signal as a first sound output signal;~~

~~a switch to which the signal output from the bass booster is fed at one end and which, when turned on, outputs that signal at another end;~~

~~a second adder to which the signal output from the high-pass filter is fed
and to which the signal output from the switch is fed, the second adder adding
together those two signals and outputting a resulting signal; and~~

~~a first output terminal by way of which the signal output from the second
adder is fed out of the deep bass sound booster device~~

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wherein the left-channel and the right-channel high-pass filters have the high-pass
characteristics and flat characteristics of which one can be selected, and

when the headphones are used to reproduce sound and when the level of signals fed to the
bass booster is muted, the flat characteristics selected, and

when the headphones are used to reproduce sound and when the level of signals fed to the
bass booster is not muted, the high-pass characteristics is selected.

Claim 4 (Currently Amended): A deep bass sound booster device as claimed in claim 3,
~~wherein the switch is turned on when the first and second sound output signals are added
together and fed out of the deep bass sound booster device by way of the first output terminal,
and the switch is turned off when the first and second sound output signals are separately fed out
of the deep bass sound booster device by way of the first and second output terminals,
respectively~~

wherein, when the loudspeakers are used to reproduce sound, the level adjusting means is
arranged in a way that the level of the signals fed to the bass booster is prevented from going
below a point at which an output signal level of the bass booster becomes lower than a level of
the input sound signals.

Claim 5 (Currently Amended): A deep bass sound booster device, that receives left-channel and right-channel input sound signals and performs sound reproduction therefrom in stereo when one of reproduction with loudspeakers and reproduction with headphones is selected, comprising:

A) ~~two processing blocks, each comprising:~~

~~an input terminal by way of which an input sound signal is fed into the deep bass sound booster device;~~

~~a high pass filter to which the input sound signal is fed from the input terminal and which permits only a frequency component higher than a predetermined frequency to pass through so as to output a resulting signal as a first sound output signal;~~

~~a bass booster to which the input sound signal is fed from the input terminal and which amplifies only a frequency component lower than the predetermined frequency and attenuates another frequency component so as to output a resulting signal as a second sound output signal;~~

~~a switch to which the signal output from the bass booster is fed at one end and which, when turned on, outputs that signal at another end;~~

~~a first adder to which the signal output from the high pass filter is fed and to which the signal output from the switch is fed, the first adder adding together those two signals and outputting a resulting signal; and~~

~~a first output terminal by way of which the signal output from the first adder is fed out of the deep bass sound booster device; and~~

~~a second adder to which two signals output respectively from the high-pass filter of each of the two processing blocks are fed and which adds those two signals together and outputs a resulting signal; and~~

~~a second output terminal by way of which the signal output from the second adder is fed out of the deep bass sound booster device~~

A1 left-channel and right-channel high-pass filters to which the left-channel and the right-channel input sound signals are fed respectively, the high-pass filters having high-pass characteristics in which only frequency components higher than a predetermined frequency are allowed to pass through for outputting;

left-channel and right-channel bass booster to which the left-channel and the right-channel input sound signals are fed respectively, amplifying only frequency components lower than the predetermined frequency, and attenuating other frequency components for outputting;

a bass adder for adding output signals from the left-channel bass booster and output signals from the right-channel bass booster together and outputting resultant signals;

a left-channel adder capable of adding two left-channel signals together and outputting resultant signals, the two left-channel signals being output signals from the left-channel high-pass filter and output signals from the left-channel bass booster;

a right-channel adder capable of adding two right-channel signals together and outputting resultant signals, the two right-channel signals being output signals from the right-channel high-pass filter and output signals from the right-channel bass booster; and

switching means for forming a first signal path when the reproduction with loudspeakers is selected and forming a second signal path when the reproduction with headphones is selected,

A/
wherein, when the first signal path is formed, output signals of the left-channel and the right-channel high-pass filters are fed to left and right loudspeakers intact respectively and output signals of the bass adder are fed to a bass loudspeaker, and, when the second signal path is formed, the two left-channel signals are added together by the left-channel adder so as to be fed to a left side of the headphones, and the two right-channel signals are added together by the right-channel adder so as to be fed to a right side of the headphones.

Claim 6 (Currently Amended): A deep bass sound booster device as claimed in claim 5, further comprising a connector to which the headphones are connected,

~~wherein the switch is turned on when the first and second sound output signals are added together and fed out of the deep bass sound booster device by way of the first output terminal, and the switch is turned off when the first and third sound output signals are separately fed out of the deep bass sound booster device by way of the first and second output terminals, respectively~~

wherein, when the headphones are connected to the connector, the switching means forms the second signal pass for the reproduction with headphones by way of contacts provided in the connector, and when the headphones are disconnected from the connector, the switching means forms the first signal pass for the reproduction with loudspeakers by way of the contacts provided in the connector.

Claim 7 (New): A deep bass sound booster device as claimed in claim 5, further comprising level adjusting means for adjusting a level of signals fed to the left-channel and the right-channel bass boosters,

A/ wherein the left-channel and the right-channel high-pass filters have the high-pass characteristics and flat characteristics of which one can be selected, and

when the headphones are used to reproduce sound and when the level of signals fed to the left-channel and the right-channel bass boosters is not muted, the flat characteristics is selected, and

when the headphones are used to reproduce sound and when the level of signals fed to the left-channel and the right-channel bass boosters is not muted, the high-pass characteristics is selected.

Claim 8 (New): A deep bass sound booster device as claimed in claim 7,

wherein, when the loudspeakers are used to reproduce sound, the level adjusting means is arranged in a way that the level of the signals fed to the left-channel and the right-channel bass boosters is prevented from going below a point at which an output signal level of the left-channel and the right-channel bass boosters becomes lower than a level of the input sound signals.
